Tube Stand. Counterweighted. Wide range of adjustment of tube, vertical and horizontal. Highly finished in polished nickel plate. Mounted in heavy cast base of cabinet.

Protection from X-Ray. The standard and approved Coolidge special heavy glass tube shield completely enclosing tube. Made of lead glass equivalent in protection to approximately 1/16″ metalic lead.

Protection to Apparatus, Patients and Operator. No exposed current carrying parts on Control Board. Mica High Tension Masts with Metal casings grounded through resistance. Standard approved cut-out in bottom section of cabinet with cartridge fuses.

Tube. Self-rectifying Coolidge Radiator type, either the ten or thirty milliampere.

Patents. This apparatus is protected by U. S. patents issued December 19, 1911, April 22, 1912, and August 7, 1917. Other patents are pending.

Circuit Breaker. Oil insulated, Positive type.

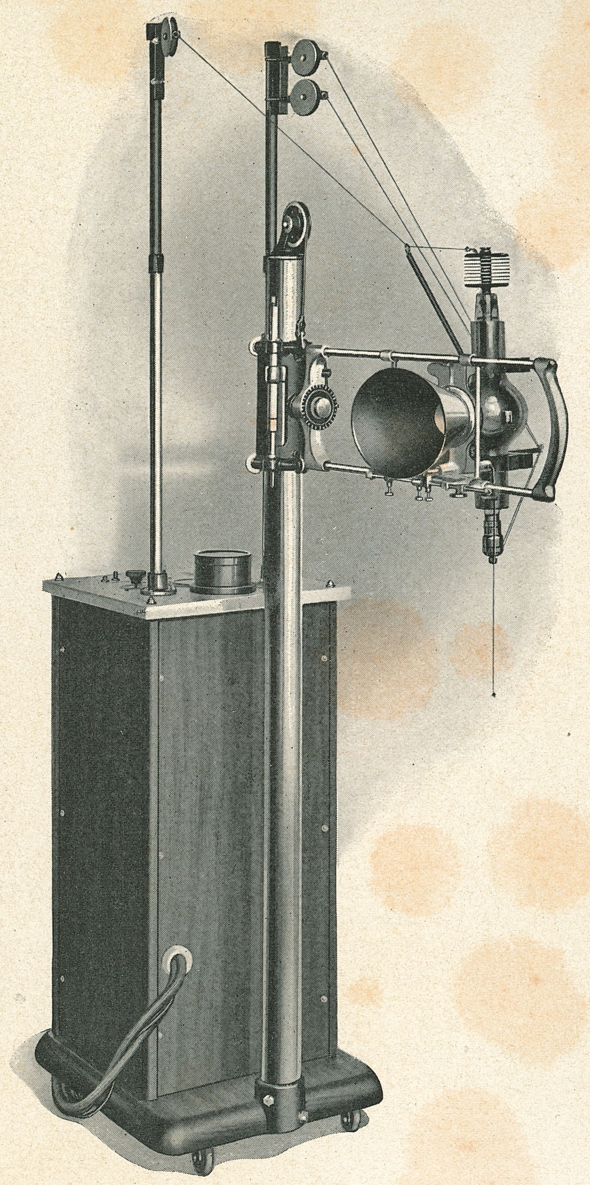
OUTFIT COMPLETE

Cat. No.	
12130	TRANSFORMER. A.C., 110 Volt, 60 Cycles, including Cabinet, Transformers, Regulators, Meters, etc., No. 12131.
12132	TUBE STAND. Counterweighted.
12119	HAND TIMER. 0-12 Second range.
12110	CIRCUIT BREAKER. Oil insulated.
12125	GLASS SHIELD. Lead protective.
12112	COOLIDGE TUBE. Radiator Type.
12107	FOOT SWITCH. Postive Type.
12136	**Outfit Complete, Boxed for Shipment. As listed above.**

Prices Quoted on Request
Special Finishes Extra

Manufactured by

CAMPBELL ELECTRIC MFG. COMPANY
LYNN, MASSACHUSETTS



CAMPBELL CLINICAL X-RAY UNIT

Cat. No. 12135
with Foot Switch

CAMPBELL ELECTRIC MFG. COMPANY
LYNN, MASSACHUSETTS

Campbell
Coolidge
Clinical
X RAY UNIT

CAMPBELL CLINICAL X-RAY UNIT

3-inch gap, 1 to 30 milliamperes; 4-inch gap, 1 to 30 milliamperes; 5-inch gap, 1 to 30 milliamperes.

Ample capacity for all Radiography and Fluoroscopy.
Silent — Always ready — Uniform Results.

(Capacity — Any work within the range of 1 to 30 milliamperes with 3" to 5" spark gap)

No Physician's, nor Hospital's equipment is complete without a Campbell Clinical X-ray Unit.

The greatest hindrance to more universal use of X-Ray has been the inability of the average operator to readily master the adjustment of the apparatus in order to obtain satisfactory results.

In the Campbell Coolidge Clinical X-Ray Unit the **Current** and **Voltage** (which regulate time of exposure and penetration) are **Fixed Quantities** instantly ready for use by pressure on the switch, and without the annoyance of the noise and adjustments of spark gaps, tube vacuum, etc.

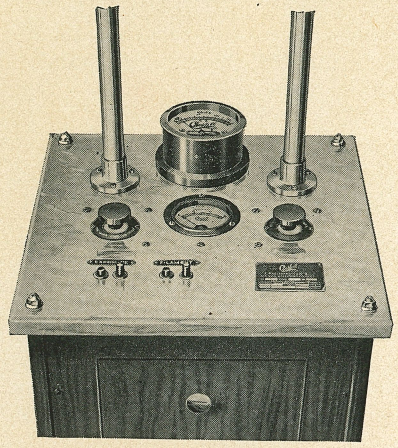
The apparatus is especially constructed with sufficient capacity and suitable regulation for operation of either the ten milliampere or thirty milliampere Coolidge Radiator self-rectifying X-Ray tube with a 3″ to 5″ spark gap, which is sufficient to radiograph or fluoroscope any part of the body, thus approaching as nearly as possible all the advantages of the SureX interrupterless transformer.

One of the principal advantages of this apparatus, which is fully covered by U. S. Patents, is that by slight adjustment of the voltage and current regulators the current may be changed to any volume from 1 to 30 milliamperes at a 3″, 4″ or 5″ gap, always maintaining the selected voltage at the tube terminals regardless of the load which in the ordinary apparatus would cause fluctuation in the penetrative value of the X-Rays, uniform maintenance of which is so necessary in order to establish the exposure technique which in results marks the difference between the expert Roentgenologist and the one who is rated as of mediocre attainment.

This equipment in connection with Eastman Dupli-Tized films and double intensifying screens, one on either side of the film, will produce wonderfully rapid work. For Dental and the majority of other work, no screen is needed.

The entire apparatus is one complete unit easily moved about and is instantly ready for use by connection to the ordinary electric light circuit for use with ten milliamperes in the tube, but for use of the thirty milliampere tube it is advisable to connect to a special circuit of No. 6 or 8 wire on account of fire underwriters' regulations relative to carrying capacities of wiring circuits.

The whole outfit is the evolution of many years of combined research work, and is a model of efficiency, beauty and durability such only as this company of twenty years' experience in the manufacture of all kinds of X-Ray apparatus for the physician, dentist and hospital will offer to the profession.



The Control Board

SPECIFICATIONS

Cabinet. Fireproof, entirely of metal, beautifully finished, with black bakelite top, polished nickel trimmed. All parts of cabinet are interchangeable so that in case of injury a new panel, corner, base, or bakelite top may be quickly replaced without expense of an entire cabinet. This method of construction allows the ready removal of all four side panels, thus leaving all internal parts of the apparatus easily accessible, very rigid, and absolutely fireproof.

Equipped with ball-bearing casters attached to the cast base.

The regular finish is Mahogany or black.

Control Board. Black Bakelite equipped with sparkmeter; milliamperemeter; spark regulator; filament regulator; auto transformer control; high tension masts with grounded metal casings; filament switch and main switch.

High Tension Transformer. Secondary 65,000 volts. Closed core, compensated type, oil insulation, metal tank. Sufficient capacity to deliver 1 to 30 milliamperes to the X-Ray tube with 3″ to 5″ gap.

Filament Transformer. A separate transformer mounted in same case with high tension transformer. Oil insulated. Stabilized.

Auto Transformers. Compensates for difference in line voltage, with adjustments 3″ to 5″ spark in ¼″ steps.

Control. Voltage and volume are simultaneously regulated by turning a regulator handle located on Control Board. This method of control compensates for rise and fall in line voltage and consequent fluctuation of penetrative value of the X-Rays. Filament current may also be very finely controlled by turning a regulator handle on front panel of cabinet. Auto Transformer is adjusted by Voltage Regulator on control board. By adjusting this regulator until the spark meter reads properly, the spark gap desired is assured with any load, if line capacity is sufficient. Lack of line capacity may be quickly determined by noting whether or not sparkmeter indicates drop in line voltage when load is turned on.

Reels. For Connecting Wires. Self-Winding, mounted on high tension masts.

Hand Timer. Standard 0-12 Second Type with Circuit Breaker.

Current Required. Operates on alternating current of from 100 to 120 volts, 40 to 60 cycles, 6 to 35 amperes, according to current used in tube. Also on direct current by addition of rotary converter mounted in bottom of cabinet for the ten milliampere tube. For the thirty milliampere tube, it is necessary to mount the converter, on account of its large size, separate from the cabinet.

Form Clinical 15M-7-1
Campbell Electric Manufacturing Company
Lynn, Massachusetts